

Northwest Territories

Regulations for Oil and Gas Operations in H₂S Areas

1. Are there any devices/alarms required of operators that have H₂S on location, and if so, at what ppm H₂S are they required to be set?

There are no regulatory requirements for H₂S devices / alarms in the *Oil and Gas Operations Act*, its regulations or Office of the Regulator of Oil and Gas Operation's (OROGO's) Guidelines.

However, OROGO requires that Safety Plans (submitted to and approved by the Regulator during the application process for an activity) require personal 4-head monitors for all personnel during all operations where H₂S is present or suspected.

The industry standard for these alarms is to go off at 10ppm.

2. Are there any postings required of operators that have H₂S on location, and if so, under what circumstances?

There are no regulatory requirements for postings in the *Oil and Gas Operations Act*, its regulations or OROGO's Guidelines.

However, OROGO requires that Safety Plans (see above) require signage at the lease entrance during operations and on any building where there is a chance for H₂S to build up.

3. How are facilities at which H₂S is present tracked?

OROGO manually tracks facilities where H₂S is present. It does not regulate enough facilities to require a more elaborate method.

4. What level or levels of H₂S are considered actionable and under what circumstances?

OROGO would action any H₂S at 10ppm (alarm triggering level) or above as an incident under the *Oil and Gas Drilling and Production Regulations* and work with the company to ensure the source is secured.

OROGO does not have many H₂S facilities or wells, none of which are in production. An H₂S release would only become known when people are on site during well interventions or well inspections.

5. Are any additional standards for rules implemented for H₂S other than the following?
 - a. ANSI- American Nation Standards Institute.
 - b. API – American Petroleum Institute.
 - c. EPA – Environmental Protection Agency.

None of the above-mentioned standards apply in OROGO's jurisdiction (NWT, Canada). OROGO follows the guidance in the H₂S Alive course provided by Energy Safety Canada.

6. Does your state have any specific H₂S safety regulations? If so, please list them below.

There are no specific H₂S safety regulations under the *Oil and Gas Operations Act*. However, Schedule O of the *Occupational Health and Safety Regulations* (under the *Safety Act* R.S.N.W.T. 1988, c.S-1) sets an 8-hour occupational exposure limit (10 ppm) and a 15-minute occupational exposure limit (15 ppm) for H₂S.

7. What are the purposes of the H₂S regulations?
 - a. Public safety - YES
 - b. Worker safety – YES (primary purpose)
 - c. Other: Environmental (impacts to fauna and vegetation suppression)

Safety Procedures for Field Inspectors

8. What type of training is required for Field Inspectors?

Energy Safety Canada's H₂S Alive

9. Are certifications required for Field Inspectors?

H₂S Alive

10. Do you have an H₂S safety specialist, and if so, what is the specialist's level of expertise?

No

11. Do state inspectors check H₂S levels, or do they require operators to check?

Operators are required to monitor H₂S levels. Inspectors wear personal H₂S monitors on site at all times.

12. If state inspectors check H₂S levels, what are the required procedures/protocols for checking to determine H₂S levels?

N/A

13. How often are readings required to be made? By whom? How/who keeps up with those readings?

H2S levels are monitored by the operator (and by inspectors when on site) throughout operations on a Sour Gas Site and upon entrance to any building or when the well bore conditions change during operations.

14. Where are Field Inspectors most likely to check for H₂S?

- a. Top of stock tanks
- b. Wellheads - YES
- c. Gas streams - YES
- d. Other: _____
- e. Not applicable

15. How do Field Inspectors respond to an H₂S complaint? (Please include in the response information on any requirements about when the Field Inspector must be accompanied by another person.)

As OROGO's sites are remote and far away from any communities or human habitation, OROGO has never received an H₂S complaint from the public.

If there is an H₂S release on site, OROGO works with the company administratively on developing mitigative measures for implementation and final repair requirements. Repairs are verified by an inspector upon completion.

If there was ever an installation close to a community, OROGO would work with the operator and other regulators, including the GNWT Emergency Management Office, to develop a plan of action in the event of a release as part of the operator's Safety Plan and Contingency Plan (both submitted to and approved by the Regulator during the application process for an activity).

16. Are inspectors required to wear H₂S monitors? If so, what type of equipment?

Yes. OROGO uses 2-year BW Clip H₂S 10-15 ppm personal monitors.